# Finding Answers in Contrary Lessons

#### Presenting:

SL Young (moderator), MJ Lefthand, BT Good Luck, L Kindness, R Stewart, J Doyle, A Knows His Gun McCormick

May 28, 2013





Apsaalooke
Water &
Wastewater
Authority



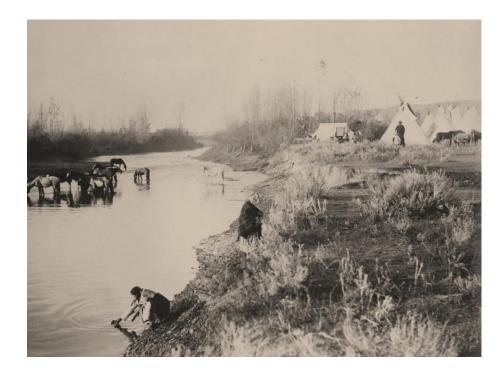
# Words are sacred, Water is sacred



Lucy Driftwood and friends, 1910. Photo courtesy Little Big Horn College Archives.

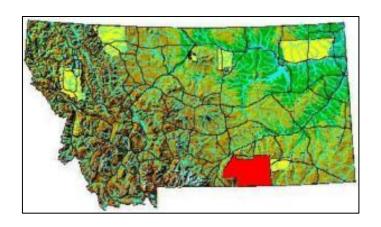
## Apsaalooke beliefs

- Origin of the Apsaalooke
- Belief: water is sacred
- Word of speech is sacred
- Spiritual symbolizations are important to the Apsaalooke



Getting water for camp from the Little Bighorn River, near present day Crow Agency. Smithsonian Institution photo, courtesy Little Big Horn College Archives.

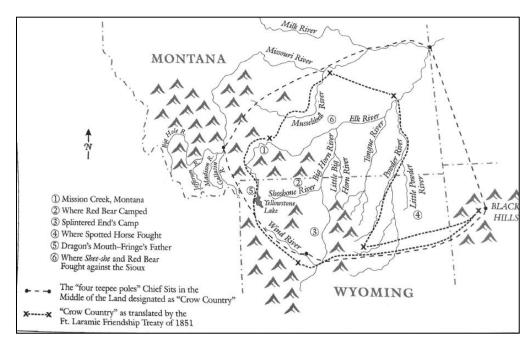
### Crow country is in exactly the right place



Present day boundaries of the Crow Reservation (above); historical Crow country as described by Chief Sits In the Middle of the Land (right).

Maps courtesy USDA (above) and Bauerle et. al. 2003 (right)

- We are fortunate to be where we have always been
- Because we've always been here, we notice changes in plants, animals, weather, our rivers



# Hunting and gathering









LarryKindness

## Knowledge gained as a hunter gatherer

- As children, we were out in the environment on a daily basis in all weather
- Changes, although subtle, were starting to become more noticeable as I grew older
- Winters are becoming shorter, rivers thaw and freeze more frequently, springs are warmer, rains less during summer months, summers are hotter, autumn months are warmer than usual, decreasing snowfalls result in open winter months
- Some amphibian and aquatic life are decreasing; invasive bird species; animals of prey staying more in the timber; berries ripening earlier and not reaching full potential
- Tribes need to adapt to a changing environment and use what we have wisely
- Tribes need to prepare for global warming and its effects

## Ceremonies and weather

#### **Ceremonies**

- Ceremony "right holders"
- Beliefs expressed everyday/spiritual practices
- Acquired observances

**Environment** 

Vegetation

Weather





Crow sundancers

## Weather



Sundogs, Fargo, North Dakota. Photo courtesy Wikimedia Commons.



Photo by Ty Smedes, courtesy Washington
Department of Fish and Wildlife (wdfw.wa.gov)

- Beliefs passed down/experienced observances
  - Changing weather patterns (e.g., warmer temps, increase in catastrophic fires, etc.)
- Relying on animals (e.g., coyote, etc.)
- Relying on the solar system (e.g., sundog, etc.)

## Contrary lessons







Photos by John Doyle



Why do we find ourselves with the problems we now have, when we have all this traditional ecological knowledge?

# Traditional Ecological Knowledge and Community-Based Participatory Research



Crow Environmental Health Steering Committee, student interns and academic partners

## Relationship between TEK and CBPR



- Community member involvement in scientific research
- Acknowledgement of traditional knowledge and cultural expertise of community members
- Respect for others, nature and elements
- Recognition and utilization of community cultural strengths and resources

# Acknowledgements

#### This research was supported by:

- The Center for Native Health Partnerships' Grant #P20MD002317 from the National Institute of Minority Health and Health Disparities, National Institutes of Health
- Grant #P20 RR-16455-04 from the INBRE Program of the National Institute of General Medical Sciences, National Institutes of Health
- Award #RD83370601-0 from the Environmental Protection Agency
- EPA STAR Fellowships Research Assistance Agreements #FP91674401 and #FP91693601 from the Environmental Protection Agency
- Institute for Translational Health Sciences, University of Washington

The content is solely the responsibility of the authors; it has not been formally reviewed by any of the funders and does not necessarily represent the official views of the National Institutes of Health or of the Environmental Protection Agency. The EPA does not endorse any of the products mentioned.

#### Academic partners:

Anne Camper, Montana State University Bozeman Margaret (Mari) Eggers, Little Big Horn College/MSU Tim Ford, University of New England





